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February 26, 2007

Federal Communications Commission  
Washington, D.C. 20554

Re: MB Docket No. 87-268; FCC 06-150

In the Matter of

47 CFR 73

Advanced Television Systems and Their Impact Upon the Existing Television  
Broadcasting Service;  
Seventh Further Notice of Proposed Rulemaking

**Summary of Reply Comments:**

With regard to Brey's Comments of January 11, 2007, regarding Proposals for Changes to the Allotment Table for Aurora, Illinois; Chicago, Illinois; and Madison, Wisconsin.

Gentlemen and Ladies:

Following the reading of comments by others to the Seventh Further Notice of Proposed Rulemaking and some email correspondence with a chief engineer and consulting engineers for some stations affected by the proposals in my comments of January 11, 2007, I submit the following reply comments.

CBS has proposed a move to channel 12 for WBBM-DT, Chicago. That would eliminate the potential co-channel interference problem in my area with WMSN-DT, Madison, WI, on channel 11. Therefore, the WBBM-DT proposal has yet another positive attribute.

I was informed by one of the consulting engineers whom I emailed that the Commission is not entertaining general channel changes at this time. I apologize to the Commission for my oversight.

It may be a moot point in view of my previous paragraph, but I withdraw channel 39 from the channel change possibilities for Madison, WI. Further calculations showed a short-spacing problem to Green Bay.

However, one technical issue does remain. The allotment of channel 16 in Rockford, Illinois, still appears to me to be in conflict with paragraph §73.623 of the Rules regarding land mobile interference. Even though that paragraph applies to amendments to the DTV Table of Allotments, I fail to see why the Commission allowed that conflict to exist in the original DTV Table of Allotments. WTVO-DT, Rockford, IL, on channel 16 is located 134.8 km (§73.611 methodology) from the city center coordinates of Chicago. §73.623 states that the adjacent channel distance should be more than 176 km.

I proposed a solution to that conflict in my comments of January 11, 2007. To demonstrate an approach to correcting that possible engineering conflict, I would like to point out that if WTVO-DT, owned by Mission Broadcasting, were to be moved from channel 16 to 41, they potentially could use the equipment on that channel already in use by WIFR-DT, Rockford, IL (licensed to Freeport), owned by Gray Television, which is moving to channel 23 after February 17, 2009. (I have not established that the transmitter output capability and antenna power gain can accomplish the required ERP for WTVO-DT, so this is strictly conjecture.) WTVO-DT could temporarily remain on channel 16 after February 17, 2009, and accomplish the move to channel 41 at a later date. If all ATSC tuners can obtain the DTV channel by reference to the station "brand," NTSC channel, the change would be seamless to the viewers.

Taking this engineering feasibility idea a step further, the WMTV-DT, Madison, WI, transmitter location is 200.4 km from the city center coordinates for Chicago, sufficiently far to avoid adjacent-channel land mobile interference. WMTV-DT's current allotment channel is 19. On that channel their calculated interference is 3.9%. Although currently "maximized," if WMTV-DT, Madison, also owned by Gray Television, were allowed to move to channel 16, they could utilize Mission's WTVO-DT's channel 16 equipment. To implement this change, after WTVO-DT had installed the channel 41 equipment, WMTV-DT could install the channel 16 equipment from WTVO-DT. WMTV-DT would remain on channel 19 until such time

as they could install the channel 16 equipment at their location. Again, hopefully all ATSC tuners would follow the change seamlessly. I believe that WMTV-DT would receive zero or close to zero percentage interference on channel 16. If WTVO-DT was no longer on channel 16, WMTV-DT could also move to channel 15, their First Round choice, except that move would violate §73.623 because the co-channel minimum distance to avoid land mobile interference is 250 km. Since channel 15 has been WMTV's NTSC channel for many years, I wonder if short-spaced operation to land mobile on that channel had been accepted via grandfathering. If that grandfathering is still valid, then I would think WMTV-DT could be allowed to move to channel 15. Also in this case I believe that WMTV-DT's signal would receive zero or close to zero interference.

Again regarding engineering feasibility, there will be a cost to the stations, which is likely to make them reluctant to make the above changes, if allowed by the Commission. Swapping of equipment, as outlined above and if feasible, would help financially. As suggested in my January comments, if the assignment of channel 16 to Rockford is indeed an oversight by the Commission, I think that the Federal government should be responsible for reasonably reimbursing the stations involved in the change for their expenses. This money could be recouped from the auction of the spectrum vacated by television stations as a result of the change from analog to digital transmission. If, as I have read, spectrum recovery was the primary driver for this conversion to digital TV, the auction should bear the cost of neatening things up.

The remainder of my channel change proposals in my comments of January 11, 2007, may be out-of-order given the guidelines of the 7th FNPRM. For those changes, I propose that the Commission entertain the prospect of allowing general amendment proposals to the DTV Table of Allotments well prior to February, 2009, for the purpose of optimizing DTV allotments for whatever reason. As shown above, even though the computer-generated DTV Table of Allotments came up with a workable plan to assign a digital channel to every full power analog station, some changes to those allotments could result in various improvements. My goal is to ensure "the best possible DTV service to the public." (7th FNPRM paragraph 16)

These allotment improvements will most benefit those viewers on the fringes of the stations' coverages. The Commission has tried to at least replicate the analog protected contours of the stations involved in this transition to digital television. However, the 24 hours a day, 7 days a week (24/7) NTSC television service received by viewers beyond the protected contours has not necessarily been replicated. As I stated previously it was bad enough that some of these viewers in our area have suffered severe interference to their analog TV from DTV interference (as far back as 1998), but now they may lose some TV stations altogether, a loss to the public.

Brey  
02/26/07

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To further explain the 24/7 service that the public could lose, my experience has shown that as long as a line-of-sight path is maintained between the transmitter and receiving site, the reception is essentially available 24/7. The Milwaukee TV stations are roughly 6 km farther from my receiving location than the Chicago TV stations. Yet the approximately 150 meter lower antenna height of the signals from Milwaukee means those signals do not provide 24/7 reception while the Chicago stations have done so. The attenuation due to the curvature of the earth appears to be the dominant factor in the case of the Milwaukee stations, not the decrease in field strength due to the inverse square law.

My comments of January 11, 2007, referred to the effects of atmospheric ducting. Ducting may be considered by the Commission to be an anomaly. In the extreme, hurricanes in Florida are also an anomaly. Just because these events do not happen every day, doesn't necessarily mean they can be ignored. And we get a lot more ducting than Florida gets hurricanes. The old NTSC station spacing dealt with ducting quite well. I believe the jury is out as to the 24/7 distant reliability of co-channel, Chicago/ Madison stations with the shortened DTV-to-DTV spacings.

None of my discussion is meant to deprecate the work that the Commission has done. I am in awe at how well this monumental task is turning out as it comes down the homestretch. I just feel the Table of Allotments could use some adjustments in northern Illinois and southern Wisconsin as only could be understood by someone living here who has to live with the consequences.

Sincerely,

Ronald J. Brey